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COLLOID CHEM WATER \*SU 1066-942-A  
26.05.82-SU-442931 (15.01.84) C021-01/28

Removal of entero-viruses from drinking water - by shaking with  
aerosil or boehmite as alumino gel or xerogel

C84-094722

D(4-A2)

Enteroviruses such as E.coli, with particle size 20-30 nm, are removed from water by adsorption either on boehmite in the form of alumogel or xerogel, subjected to hydrothermal treatment, and having pore dia. 80-90 nm, or on aerosil with particle dia. 20-40 nm. The method gives drinking water of reliable quality, unlike the previous method of adsorption on activated carbon, which did not ensure removal of 100% of the enteroviruses.

Typically the alumogel was heat treated at 300 deg. for 6hr to give oxide with specific surface 20 m<sup>2</sup>/g. and the xerogel was obtd. by drying the alumina at 100 deg. to give specific surface 20m<sup>2</sup>/g. The aerosil was the commercial product heat treated at 1400 deg. In SiCl<sub>4</sub> vapour to give powder of spherical particles with dia. 20-40nm. Drinking water with litre 6.28 TDD was shaken with 2mg/100 ml. boehmite in the form of xerogel for 4 hr. The filtered water contained no enteroavirus. BuI2/15.1.84. (3pp Dwg.No.0/0)